Dental porcelain may be high fusing, medium fusing or low fusing according to the amount of glass modifiers as follows: 1-High-fusing: 1200-1400?C: used for making denture teeth.Designing components of the restoration to minimize stress concentrations and tensile stresses.It is done either by self-glaze (heating the porcelain to allow flow of the glass at the surface of the ceramic restoration), or add-on glaze (low fusing glass is added to the surface of the porcelain and fired). Self-glaze porcelain is preferred to an add-on glaze because the later contains more glass modifiers and thus has a lower firing temperature and has lower mechanical properties. Care should be taken to avoid pyroplastic flow during self-glaze. 6. Cooling Slow cooling or annealing should be done to avoid surface crazing. Cooling under pressure can be performed to reduce porosity. Properties of dental porcelain I- Shrinkage during firing This could be due to: a- Loss of residual water. c- Thermal contraction due to cooling. Shrinkage can be overcome by: Proper condensation during building. Overbuilding of the restoration. 3- Incremental building. The use of fine-grained powder of different grain sizes. I- Porosity It is an inherent property of fired porcelain. It affects strength by acting as stress concentrators and affects aesthetics by acting as scattering centers that reduces translucency. Methods of reducing porosity of fired porcelain are: 1- Firing under vacuum to remove air. 2- Firing in the presence of a diffusible gas like helium. 3- Cooling under pressure. 1II- Chemical properties It is chemically stable in most environments because of the type of bonding (ionic and covalent bonding). It contains the lowest amount of glass modifiers as Na and K so has maximum silicate cross-links and accordingly *strength, ?solubility and 1 stability (as the amount of glass modifiers increases, the fusion temperature decreases).Methods of strengthening of ceramics Porcelain ceramics are brittle materials, their strength values are much lower than the predicted values based on the strength of their primary interatomic bond.5.2.